

Notice of Allowability

Application No.

09/621,234

Examiner

Ana M Fortuna

Applicant(s)

HENSHAW ET AL.

Art Unit

1723

ed

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/20/03.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☒ The drawings filed on 20 July 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____ | 6 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

Ana M Fortuna
Primary Examiner
Art Unit: 1723

/c

EXAMINER'S AMENDMENT/REASONS FOR ALLOWANCE

C An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

15. (Currently Amended) A system for treating a multicomponent liquid substrate while leaving particulate matter therein, comprising,

- 9
- (a) a non-pressurized reservoir other than a shell of a module for containing the substrate;
 - (b) a cylindrical skein of hollow fiber filtering membranes immersed in the substrate each fiber having a length greater than 0.5 m, the fibers together providing a surface area of at least greater than 1 m² and disposed generally vertically between upper and lower cylindrical headers with (i) the headers having the fibers sealingly secured therein, the fibers spaced apart by a flexible support means having a thickness corresponding to a desired lateral spacing between adjacent fibers, said support means extending over a portion of said fibers near their ends, so as to maintain said ends in closely-spaced apart relationship, (ii) lumens of said fibers being in fluid communication with at least one permeate collection means, and, (iii) said fibers having a length between opposed surfaces of the headers, in the range from 0.1% to 5% greater than the distance between opposed surfaces of the headers;
 - (c) a pump in fluid communication with said lumens of said membranes through at least one permeate collection means, said pump operable

Art Unit: 1723

to apply a suction to the lumens of the membranes to draw a component of the substrate as permeate through said membranes while leaving particulate matter in said substrate; and,

C1
cont.

- (d) aeration means having through-passages with openings, distributed both radially and circumferentially within the skein for discharging air directly into the substrate near the base of the skein, the openings providing a column of bubbles rising from near the base of the skein.

16. (Previously added) The system of claim 15 wherein the length is in the range from 0.1% to 1% greater than the distance between the opposed surfaces of the headers.

C2

17. (Previously added) The system of claim 16 wherein the aeration means includes a rigid air supply tube for carrying air to the through-passages and for spacing and positioning the lower and upper headers relative to one another.

18. (Previously added) The system of claim 17 wherein the air supply tube has additional through-passages along its length.

Delete claims 19-22.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M Fortuna whose telephone number is (703) 308-3857. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Application/Control Number: 09/621,234

Page 4

Art Unit: 1723

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'Ana M Fortuna', written in a cursive style.

Ana M Fortuna
Primary Examiner
Art Unit 1723

AMF

February 05, 2004